



Air Force Research Laboratory | AFRL

Science and Technology for Tomorrow's Air and Space Force

Success Story

CONTROL OF MULTIMISSION UAV SYSTEMS



Control of Multimission Un manned Air Vehicle Systems (CMUS) vehicle management system computer hardware is a combination flight control and mission control computer that will save space and weight. This system will enable engineers to design flight control systems with the reliability of manned aircraft in a size and weight appropriate for smaller, unmanned air vehicle (UAV) systems.



Air Force Research Laboratory
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Accomplishment

AFRL scientists successfully created and demonstrated in the laboratory environment a new air vehicle hardware system that joins a flight control computer with a mission control computer. This system, part of the CMUS program, brings the computers together in one location. It allows them to share information effectively and still retain their separate functions. In addition, CMUS has a fail-safe feature that ensures the flight control computer has priority if a conflict arises between the two computers. By colocating and linking the two computers, CMUS eliminates the need for network connection hardware used in conventional air vehicle designs. As a result, the system saves weight and space.

AFRL developed CMUS in support of the Joint Unmanned Combat Air Systems (J-UCAS) program. However, the technology potentially may benefit all future air vehicles.

Background

The J-UCAS program is a joint Defense Advanced Research Projects Agency/Air Force/Navy effort to develop UAVs to carry out missions like surveillance, precision strike, and enemy air defense suppression.

Air Vehicles
Support to the Warfighter

Additional Information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (04-VA-28)